NON-PUBLIC?: N
ACCESSION #: 9008010237
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Oyster Creek Unit 1 PAGE: 1 OF 3

DOCKET NUMBER: 05000219

TITLE: Reactor Scram on Low Condenser Vacuum During Initiation of Condenser Backwashing
EVENT DATE: 06/25/90 LER #: 90-008-00 REPORT DATE: 07/23/90

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: POWER LEVEL:

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Daniel T. Barnes TELEPHONE: (609) 971-4719

COMPONENT FAILURE DESCRIPTION:
CAUSE: B SYSTEM: SI COMPONENT: 52 MANUFACTURER: G080
REPORTABLE NPRDS: N

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

On June 25, 1990, at approximately 6:18 AM, a reactor scram occurred on low condenser vacuum. The scram occurred during initiation of backwashing of the A north main condenser. The scram was caused by the failure of the backwash outlet valve to open, causing a loss of circulating water to the A condenser. The backwash outlet valve failed to open due to a breaker trip of the motor operator. The plant was stabilized in a hot standby condition and subsequently taken to cold shutdown. The motor operator, the breaker and the valve were all inspected and tested satisfactorily. The auxiliary contacts on the motor close coil were replaced and auxiliary contacts on the motor open coil were realigned. The remaining 20 circulating water valves manipulated during backwashing evolutions were tested and verified to be operating properly.

END OF ABSTRACT

DATE OF OCCURRENCE

The event occurred on June 25, 1990 at approximately 0618 hours.

IDENTIFICATION OF OCCURRENCE

While initiating the daily backwash (EIIS-SI) of a main condenser (CIF-COND), the backwash outlet valve, V-3-18, (CIF-20) failed to open. This failure resulted in a loss of circulating water (EIIS-KE) to the A condenser causing sufficient decrease in vacuum to actuate the Reactor Protection System (EIIS-JC) low condenser vacuum scram. This event is reportable under 10CFR50.73(a)(2)(iv), "Automatic Initiation of any Engineered Safety Feature, including the Reactor Protection System".

CONDITIONS PRIOR TO OCCURRENCE

The reactor was at 100 percent power in the RUN mode with a generator output of approximately 632 megawatts electric.

DESCRIPTION OF OCCURRENCE

On June 25, 1990, the plant automatically scrammed on low condenser vacuum while backwashing the main condensers. Backwashing is performed daily to maintain condenser tube cleanliness. Oyster Creek has three parallel condenser sections and each section has north and south water boxes. Normal circulating water flowpath is through all six water boxes. Backwashing A north condenser half allows normal flow through A south. The A south discharge is then routed to A north outlet for reverse flow to A north inlet and discharge throu
h the backwash outlet valve.

A control room operator initiated the backwash for A north main condenser by taking the backwash control switch to backwash. The three valves controlled by this switch (south outlet closes - south to north outlet crosstie opens - north backwash outlet opens) started to stroke as observed by double position indication. The A north circulating water inlet and outlet valves were then given a close signal. The CRO then observed loss of position indication for the backwash outlet valve and realized its breaker (CIP-52) had tripped. All five valves have seal in circuits therefore the failure of the backwash outlet valve to open caused a loss of circulating water to the A main condenser. An electrician standing by near the motor control center reset the breaker and closed the opening contactor. As the backwash outlet valve was

stroking open the Reactor Protection System Low Vacuum Scram initiated. Elapsed time from taking the switch to backwash to the reactor scram was just over one minute.

APPARENT CAUSE OF OCCURRENCE

The cause of this occurrence is the failure of the backwash outlet valve to open. The breaker for the valves motor operator tripped on overcurrent. Binding of the auxiliary contacts on the motor close coil and out of alignment contacts on the motor open coil were observed. It is postulated that only two phases made up causing an overcurrent condition.

ANALYSIS OF OCCURRENCE AND SAFETY SIGNIFICANCE

The Reactor Protection System performed as intended shutting down the reactor on low condenser vacuum. This scram protects the main condensers from overpressurization and minimizes the transient on the reactor vessel by shutting down the reactor prior to the turbine trip (stop valve closure). No other safety systems were initiated. This event would have been less significant at lower power levels. This event has minimal safety significance.

CORRECTIVE ACTION

1. The motor and associated cable for the backwash outlet valve (V-3-18) were meggared with acceptable results.

2. The breaker was inspected and its routine preventive maintenance check was performed satisfactorily.

3. The auxiliary contacts on the motor closed coil were replaced and auxiliary contacts on the motor open coil were realigned.

4. V-3-18 was stroked while taking current traces. Results were within nameplate data.

5. The remaining 20 circulating water valves manipulated during backwashing were stroked while taking current traces. All valves stroked smoothly and current traces were less than nameplate data.

6. Procedure 323 was revised to include a 10 second time delay between placing the backwash control switch to backwash and isolating the circulating water inlet and outlet valves.

SIMILAR EVENTS

None.

EQUIPMENT FAILURE DATA

Cause: B
System: SI
Component: 52
Component Manufacturer: General Electric Co.
Component Model: TEF134036
Reportable to NPRDS: No

ATTACHMENT 1 TO 9008010237 PAGE 1 OF 1

GPU Nuclear GPU Nuclear Corporation
Post Office Box 388
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609 971-4000
Writer's Direct Dial Number:

July 23, 1990

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Licensee Event Report

This letter forwards one (1) copy of Licensee Event Report (LER) No. 90-008.

Very truly yours,

E. E. Fitzpatrick
Vice President & Director
Oyster Creek

EEF:BDe
(ler/Covltrs:jc)

Enclosure

cc: Mr. Thomas Martin, Administrator
Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Alexander W. Dromerick
U. S. Nuclear Regulatory Commission
Washington, DC 20555

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731

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